



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,845	02/18/2004	Jan K. Schiffmann	DP-309762	2509

7590 07/31/2006
STEFAN V. CHMIELEWSKI*
DELPHI TECHNOLOGIES, INC.
Legal Staff MC CT10C
P.O. Box 9005
Kokomo, IN 46904-9005

EXAMINER

MANCHO, RONNIE M

ART UNIT	PAPER NUMBER
----------	--------------

3663

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,845

Applicant(s)

JAN K. SCHIFFMANN ET AL

Examiner

Ronnie Mancho

Art Unit

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/15/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Janky et al (6067031).

Regarding claim 1, Janky et al (figs. 3-6, col.9, lines 26-67; col. 10, lines 1-65) disclose a collision detection system comprising:

a first sensor 81 for sensing an object (V3, fig. 3) in a field of view and measuring a first range (col. 9, lines 26-67) defined as the distance between the object and the first sensor (see fig. 3);

a second sensor 83 for sensing the object in the field of view and measuring a second range defined by the distance between the object and the second sensor (col. 9, lines 26-67; and

a controller (13, col. 3, lines 6-60) for processing the first and second range measurements, said controller further estimating a crossing location (delta y, fig. 3; col. 9, lines 52-64) of the object as a function of the first and second range measurements.

Regarding claim 2, Janky et al (figs. 3-6, col.9, lines 26-67; col. 10, lines 1-65) disclose the collision detection system as defined in claim 1, wherein the crossing location is estimated relative to a location midway between the first and second sensors.

Art Unit: 3663

Regarding claim 3, Janky et al (figs. 3-6, col.9, lines 26-67; col. 10, lines 1-65) disclose the collision detection system as defined in claim 1, wherein the first sensor further determines a first range rate and the second sensor further determines a second range rate (fig. 3), wherein the controller estimates the crossing location of the object further as a function of the first and second range rate measurements (see col. 9, lines 26-65).

Regarding claim 1, Janky et al (figs. 3-6, col. 9, lines 26-67; col. 10, lines 1-65) disclose the collision detection system as defined in claim 3, wherein the controller computes a mathematical square of the range and computes a mathematical square of the product of range and range rate for each of the plurality of measurements for each of the first and second sensors, said controller further generating a first curve based on the computations of the plurality of measurements sensed by the first sensor and a second curve based on the computations of the plurality of measurements sensed by the second sensor, said controller estimating the crossing location of the object as a function of the first and second curves.

Regarding claim 5, Janky et al (figs. 3-6, col.9, lines 26-67; col. 10, lines 1-65) disclose the collision detection system as defined in claim 4, wherein the crossing location of the object is estimated as a function of the distance between the first and second curves.

Regarding claim 6, Janky et al (figs. 3-6, col.9, lines 26-67; col. 10, lines 1-65) disclose the collision detection system as defined in claim 5, wherein the crossing location relative to a location midway between the first and second sensors is estimated by dividing the distance by twice the separation distance of the first and second sensors.

Regarding claim 7, Janky et al (figs. 3-6, col.9, lines 26-67; col. 10, lines 1-65) disclose the collision detection system as defined in claim 1, wherein the controller computes a

Art Unit: 3663

mathematical square of range estimates for each of the first and second sensors, computes a difference of the squares, and estimates the crossing location as a function of the computed difference of the squares.

Regarding claim 8, Janky et al (figs. 3-6, col.9, lines 26-67; col. 10, lines 1-65) disclose the collision detection system as defined in claim 1, wherein the controller further divides the difference of the squares by twice the separation distance between the first and second sensors to estimate the crossing location relative to a location midway between the first and second sensors.

Regarding claim 9, Janky et al (figs. 3-6, col.9, lines 26-67; col. 10, lines 1-65) disclose the collision detection system as defined in claim 7, wherein the controller comprises a tracking filter.

Regarding claim 10, Janky et al (figs. 3-6, col.9, lines 26-67; col. 10, lines 1-65) disclose the collision detection system as defined in claim 1, wherein the collision detection system is employed on a vehicle and estimates the crossing location of an object relative to the vehicle.

Regarding claim 11, Janky et al (figs. 3-6, col.9, lines 26-67; col. 10, lines 1-65) disclose the collision detection system as defined in claim 1, wherein the controller further generates a collision output signal as a function of the estimated crossing location of the object.

Regarding claim 12, Janky et al (figs. 3-6, col.9, lines 26-67; col. 10, lines 1-65) disclose the collision detection system as defined in claim 1, wherein the first and second sensors each comprises a radar sensor.

Regarding claim 13, Janky et al (figs. 3-6, col.9, lines 26-67; col. 10, lines 1-65) disclose the collision detection system as defined in claim 1, wherein the controller estimates the crossing location of the object absent an azimuth angle measurement of the object.

3. The statements of intended use or field of use found in claims 1-13 such as, "estimating a crossing location as a function of.....", "estimated relative to as location midway...", "determines first range rate...", "computes a mathematical square", "generating a first curve based on...", "computations of a plurality of measurements", "estimated by dividing", "computes a difference", "divides the difference", etc clauses are essentially method limitations or statements of intended or desired use. Thus, these claims as well as other statements of intended use do not serve to patentably distinguish the claimed structure over that of the reference. See *In re Pearson*, 181 USPQ 641; *In re Yanush*, 177 USPQ 705; *In re Finsterwalder*, 168 USPQ 530; *In re Casey*, 512 USPQ 235; *In re Otto*, 136 USPQ 458; *Ex parte Masham*, 2 USPQ 2nd 1647.

See MPEP § 2114 which states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ 2nd 1647. Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. *In re Danly*, 120 USPQ 528, 531

Apparatus claims cover what a device is not what a device does. *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ2d 1525, 1528.

As set forth in MPEP § 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

Response to Arguments

4. Applicant's arguments filed 5/11/06 have been fully considered but they are not persuasive.

The applicant is arguing that the prior art does not disclose the method limitations of the claims. Particularly, the applicant is arguing that the prior art does not disclose “first and second sensors *for sensing* an object in a field of view and *measuring* a first range defined as the distance between the object and the first sensor, and the second range defined by the distance between the object and the second sensor.” The examiner disagrees. It is noted that applicant's line of reasoning seems to require that both sensors sense the object at the same time. However, the claim language did not call for both sensors sensing the object at the same time. In a first scenario, in the prior art, assuming that both sensors do not sense an object at the same time, it is clear that the sensor 83 senses vehicle 43 on the right side of host vehicle 11, later on if vehicle 43 moves to the center lane, sensor 81 also senses the same vehicle 43, and later on if vehicle 43 moves to the left lane of host vehicle, sensor 85 also senses the same vehicle 43. Therefore, the prior art anticipates the claims.

In a second scenario, the prior art teaches that sensor 83 senses an object 43 on the right lane of host vehicle 11 **AND ALSO** all objects in the X-Y plane as shown in fig. 3, (col. 9, lines 52-67). The prior art further teaches that sensor 81 senses all objects in front of host vehicle 11. Now it is clearly seen that vehicle 41 is directly in front of host vehicle 11 and also lies in the X_Y plane as shown in fig.3. Therefore, sensor 83 senses vehicle 41 which is in the X-Y plane and sensor 81 also senses vehicle 41 which is also in the X_Y plane and directly ahead of host

Art Unit: 3663

vehicle 11. Both sensors measure the distance to the objects sensed, wherein the distance is later processed by a controller or processor. Therefore, the prior art anticipates the claims.

The applicant further argues that the prior art does not disclose a processing first and second range measurements to an object, etc. The examiners disagree. These limitations are drawn to method limitations in an apparatus claim which do not impart any noticeable structure to distinguish the invention from the prior art. On the other hand, the prior art anticipates the claims as already pointed out. Even if the prior art did not particularly disclose the method limitations, the prior art structure is capable of performing the method limitations in the claims since a processor or controller is capable of being programmed or reprogrammed to perform the limitations in the claims.

Applicant went forward to argue that the claims contain method limitations that must be given patentable weight. Applicant is ignoring the and over ruling the rules in MPEP by imposing his own rules requiring the examiner abide by. This is impermissible. As pointed out by applicant's arguments, the court held that functional language in an apparatus claim requires that the accused apparatus perform the recited function. In this case, the recited apparatus in the prior art is capable of performing the recited function in the claims. As already pointed out above, the recited function in the claim is anticipated by the prior art.

It is believed that the rejections are proper and stand.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Communication

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 571-272-6984. The examiner can normally be reached on Mon-Thurs: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

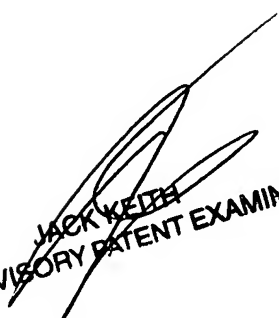
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/780,845
Art Unit: 3663

Page 9

Ronnie Mancho
Examiner
Art Unit 3663

7/24/06


JACK KEDE
SUPERVISORY PATENT EXAMINER